LEARNING TO EXPORT: BUILDING FARMERS' CAPABILITIES THROUGH PARTNERSHIPS IN KENYA'S FLOWER INDUSTRY

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Abstract – The participation of the smallholder farmers (growing summer flowers) has been minimal and on the decline and in sharp contrast to the overall upward growth in volume, value and acreage of cut flowers in Kenya – largely from large scale growers. In order to improve the participation of smallholder farmers, the government of Kenya is promoting 'farmer – exporter' partnerships to enable smallholder farmers access export markets as well as access inputs and knowledge for growing and exporting cut flowers. This paper uses data from a recent case study conducted in 2008/2009 to explore the role of 'farmer – exporter' partnerships in building the capabilities of smallholder farmers. It argues that for sustainability, these partnerships should focus beyond the market access problem and embrace the broader goal of building the capabilities of smallholder farmers to innovate and respond to their ever changing contexts. The study is underpinned by the innovation systems literature but also draws from value chain analysis and supply chain management concepts and uses a mixture of quantitative and qualitative methods in examining the role of partnerships in building capabilities. The study finds that whereas the partnerships have achieved the market access objective, smallholder farmers are "locked-in" in performing routine production functions but "locked-out" of value addition activities that are likely to undermine exporters' interests. The terms of contracts further entrench this "lock in – lock out" relationship.

Key words: partnerships, capabilities, learning, innovation.

INTRODUCTION

The high costs of technology, knowledge intensity of production, lack of access to capital, strict market regulations and standards; and demanding infrastructural requirements have connived to exclude smallholders in developing countries from the high value export floriculture industry. This situation is reflected in the key cut flower producing countries. For example in Kenya which is the fourth largest world exporter of cut flowers, the contribution from smallholders is limited to summer/tropical flowers and accounts for between 5 – 10 percent of all exports (Fintrac, 2005; Muthoka and Muriithi, 2008; Dolan, Opondo and Smith, 2004). Similarly, Mather (2008) has noted that "in other African countries, including Uganda and Tanzania, there are no smallholder cut flower farmers". Sonko *et al* (2005) confirm Mather's claim and note that in Uganda, "there are no smallholder growers of flowers since the investment requirements are prohibitive". Similar concerns are recorded by the Mytelka (2009) on the cut flower sector in Columbia. Mytelka has reported that in Columbia's cut flower sector, traditional micro – farmers (campesinos) with farms of only 0.5 to 1.5 hectares, have resorted to supplying labour as their main activity. In Ecuador, a review by Korovkin (2003) has concluded that cut flower production is concentrated in hands of a few big companies with limited opportunities for smallholders.

This exclusion of smallholders from cut flower production leaves the industry in the hands of big players – the medium and large scale companies. These companies have invested heavily in the technological infrastructure such as computerized greenhouses and fertigation systems; some have their own in-house R&D facilities; chartered flights and in some cases have founded subsidiary companies in the export markets to handle marketing issues (Bolo, 2005).
Smallholders are confined to summer flowers (or tropical flowers). These require minimal technological and capital investments since the flowers can be grown in the open fields (outdoors) through rain-fed agriculture. The smallholders access export markets mainly through intermediaries who are either specialized export companies (as the Kenyan cases in this study show) or medium and large scale exporters who also grow and export their own flowers. In most cases, the exporters provide extension and technical support to the smallholders.

THE DECLINING PERFORMANCE OF SMALLHOLDER FARMERS

Muthoka and Muriithi (2008) have estimated that of the approximate total 5,000 farmers engaged in cut flower production in Kenya, between 3,000 – 4,000 small holders (less than 0.4 – 1.6 ha) contribute only 5 – 13 % of the total exports. Several studies have estimated that the contribution of small holders has been declining over time. A diagnostic survey conducted by KARI in 2000/2001 in Uasin Gishu and Trans-Nzoia districts of the North Rift Valley region indicated that cut flower production in the region by small and medium scale growers had declined from the 1999/2000 values by up to 50 % of the total land previously under cut flower production (KARI annual report, 2002 pp. 42). A similar survey conducted in 2004 in Kiambu and Nyandarua districts (Central province) on *Gladiolus sp.* (mostly grown by smallholders) revealed a 56 % decline in the hectarage cropped under gladiolus between 2003 and 2004 due to several reasons including deterioration of corms (planting materials) (Gachukia et al; 2003; KARI annual report, 2006 pp. 69). Similarly, a baseline survey by the USAID-funded Kenya Horticultural Development Programme (Fintrac (2005) has shown that the estimated summer flower share of the total flower exports (2000 – 2003) have been declining both in volume (from 13.5 % to 5.1 %) and value (from 8.6 % to 4.8 %) as shown in table 1 below.

Table 1: Share of summer flowers as a % of total flower exports (2000 – 2003)

Volume (MTs)					Value (Kshs. Millions)			
Year	2000	2001	2002	2003	2000	2001	2002	2003
Total flowers	38.757	41.396	52.107	60.983	7,166	10,627	14.972	16,496
Summer flowers	5239.7	3812.7	3343.3	3084.3	627.7	658.6	602.8	783.9
% share of summer flowers	13.5	9.2	6.4	5.1	8.6	6.2	4.1	4.8

Source: Fintrac (2005)

As a response to this declining performance, the Kenyan government is promoting 'farmer – exporter' partnerships to forestall and reverse the declining smallholder contribution in flower export business. The exporters represent a new breed of actors in the flower industry. They are analogous to [1]Gereffi's "manufacturers without factories." They neither own farms nor grow flowers but enter into partnerships with other farmers (smallholders or medium scale/large scale) who produce flowers and sell to them. In the *strategy for the revitalization of agriculture (2004 – 2014)*, which

[1] See Gereffi (1999). A commodity chains framework for analyzing global industries

the current government policy in agriculture, this emphasis on partnerships is captured thus:

> "…where contractual obligations can be enforced, forging partnerships between smallholders and agribusiness in the form of out grower and contract farming schemes will be encouraged.
> Such partnerships allow smallholders to enjoy assured markets for their products and the supply of inputs on a credit basis or through input voucher schemes." (pp. 48)

This paper uses these partnerships as a case study into how Kenya has attempted to enhance opportunities for inclusion of smallholder farmers into the high value export floriculture. Even though these partnerships are conceptualized with market access as the primary goal, the paper examines the extent to which they also contribute to the broader goal of building the capabilities of smallholders. The paper argues that in order to avoid exclusion and further marginalization, the partnerships with smallholders must go beyond market access issues and embrace the broader goals of building smallholder capabilities to respond to their ever-changing contexts – whether these changes are technological, social or economic in nature.

CAPABILITIES, INNOVATION AND COMPETITIVENESS

This paper draws its definition of capabilities heavily from the works of Leonard – Barton (1992) on "core capabilities" and Teece, Pisano and Shuen (1997) on "dynamic capabilities." They define capabilities as the 'knowledge set that differentiates and confers competitive advantage.' Leonard-Barton identifies four dimensions of core capabilities thus: skills and knowledge base; technical systems; management systems and values and norms.

The first dimension, *skills and knowledge base* refers to 'the difficult – to – imitate know – how, talents and experiences', which are embodied in employees. The second dimension refers to the fact that this knowledge is sometimes embedded in *technical systems*. This is in keeping with Mackenzie and Wackjman (1985) assertion that technologies are more than physical artifacts but an embodiment of knowledge. The third dimension refers to *management systems* i.e. systems of monitoring and coordination that guide knowledge creation and control, while the fourth dimension – *values and norms* – speaks to the role of institutions that determine how knowledge is generated, shared and controlled.

Teece, Pisano and Shuen (1997) have pushed the discussion on capabilities further to what they have termed "dynamic capabilities" – defined as "the ability to sense and then seize new opportunities, and to reconfigure and protect knowledge assets, competencies and complementary assets and technologies to achieve sustainable competitive advantage." This ability, they have argued emphasizes the need for continuously "adapting, integrating and reconfiguring internal and external organizational skills, resources and functional competencies to match the requirements of a changing environment."

The dynamic capability – the ability to sense and seize new opportunities – ties in closely with learning and innovation i.e. the application of new knowledge for economic or social benefits. It concerns whether new knowledge when gained is applied/utilized to enhance the competitiveness of the firm. Such dynamic capabilities determine the farmers' ability to reconfigure their activities and adapt to their changing contexts. Faced with constant changes emerging from the markets, farmers need to continuously adapt to meet new standards and conditions. The main thrust of this paper therefore lies on how the partnerships influence the farmers' capabilities to respond to challenges and changes in their contexts. The paper considers three types of capabilities:

(i) Production capabilities refers to the knowledge set required for all the pre-harvest activities from deciding on which flower varieties to grow, when to grow it, how to grow it, which inputs are required, to when to harvest the flowers. (ii) *Value addition capabilities* refer to the knowledge set required for the range of activities that occur between harvesting of flowers and their arrival in the final markets. They are processes that transform the flowers from the 'raw materials' to 'finished products' (iii) *Marketing capabilities* refers to knowledge about the mechanisms through which the flowers reach their final destinations. They ensure that the farmer can access and retain key markets for their flowers, whether these are export or domestic markets.

THE INNOVATION SYSTEMS APPROACH AND CAPABILITY BUILDING

The concept of the 'innovation system' (Lundvall, 1985; Edquist, 1997) emerged in the mid 1980s to explain the shortcomings of the linear approaches to innovation. The approach lays emphasis on the flow of knowledge, technology, information and other resources amongst the different actors representing the science and technology (R&D) function; the market place as well as intermediary organizations within a given institutional framework as key to an innovative process. It holds that close interaction between the actors is needed in order to turn an idea into a process, product or service on the market.

This approach has been applied largely to developed countries and used to analyze industrial development rather than agricultural development to a greater extent. Many analysts however agree that the approach might be very relevant for the developing countries as well (Clark 2001, Lundvall et al (2002), Hall, Oyeyinka and Mytelka 2006). They have argued that the approach could be useful in diagnosing weaknesses within the national agricultural systems and advise policymakers on how to strengthen the systems.

The Technical Centre for Agricultural and Rural Cooperation, ACP-EU (CTA) has piloted the application of the approach in analyzing the agricultural sectors in Africa, Caribbean and the Pacific. Similar initiatives have also been undertaken by the World Bank. The results of these pilot case studies demonstrate that the innovation systems approach can be used to determine and explain how different policies/ institutional frameworks and combination of agents (actors) are involved in innovative activity; and how their interactions or lack thereof contributes to or undermine learning and innovation. These pilot studies have concluded that the approach is helpful in identifying problems/weaknesses that should be the object of policy response and how new policies might be designed to solve/mitigate the problems (World Bank, 2006; Francis, 2009)

By laying emphasis on actors, institutions and interactions, the innovations systems approach provides a broad and flexible framework within which to explain agricultural development. Even though the case study focuses on farmer – exporter partnerships, it is recognized that such bilateral partnerships do not preclude multilateral relationships with other actors and that in reality, farmers interact with a much broader set of actors within the innovation system. Still, when it comes to analyzing bilateral partnerships between actors, a number of 'partnership-specific' issues arise which are not adequately handled by the innovation systems alone. Such issues include: power relations/asymmetry, opportunism and dependence. While the innovation system advocates for interactions, linkages, alliances and partnerships as mechanisms to promote learning, knowledge flows and technology exchange, it either doesn't anticipate or ignores the challenges of opportunism, dominance and dependence amongst actors. As a result, whereas learning through partnerships may lead to 'new combination of skills, resources, knowledge and

technologies', in the case of unequal actors, interactive learning could also lead to increased polarization thereby subjecting weaker actors to further marginalization. This view has been captured in the works of Lundvall et al (2002:226) who have argued that:

> "Another weakness of the systems of innovation approach is that it is still lacking in its treatment of the power aspects of development. The focus on interactive learning – a process in which agents communicate and even cooperate in the creation and utilization of new economically useful knowledge – may lead to an underestimation of the conflicts over income and power, which are also connected to the innovation process…."

PARTNERSHIPS, POWER AND CAPABILITY BUILDING

Partnerships - defined in this case as non-equity cooperative relationships - have been acknowledged as an effective mechanism for learning, knowledge sharing, technology transfer, market access and the development of technological and innovative capability (CSD, 1998; Smith, 2005; Chataway, Smith and Wield, 2005). However, the role of partnerships in capability building, especially where such partnerships are characterized by asymmetric power relations, is not unproblematic.

Robinson, Hewitt and Harris (2000) concur that partnerships are a useful strategy to achieve development but also warn that partnerships could often disguise differential power relations and that the language of partnerships could be a smokescreen for other forms of relationships. The power asymmetries raise issues that have led scholars to question the potential of partnerships to contribute to the building of smallholder capabilities. Literature from the fields of supply chain management and value chain analysis shed further light into the influence of power asymmetries. For example, Christopher and Juttner (2000) have argued that as a result of the asymmetries, "a majority of companies will find themselves in a chain which is dominated by the so-called "chain captain" and are therefore unable to proactively define the terms of the relationship from such a weaker position" while Parker and Hartley (1997) have emphasized this point further by arguing that most of the so – called partnerships are misleading since dependency rather than partnerships seems to best describe a number of such relationships.

To further emphasize the effects of such inequalities, Johnsen and Ford (2008) have noted that often 'smaller suppliers may have little option but to follow the stipulated relationship norms of a larger customer if they wish to maintain the relationship' and many a times the smaller suppliers become specialized into narrow confines of the relationships and may become 'hostage' to a particular customer. In many instances, the smaller supplier may have to give up its individual goals for the benefit of maintaining the relationship with a single large customer (ibid).

RESEARCH METHODS

The study employed a triangulated research approach involving both quantitative methods (questionnaire survey) as well as qualitative methods (in-depth interviews) conducted in two phases. Phase 1 involved a survey using a structured questionnaire which focused on three key issues: the farm demographics; the role of R&D and the partnerships with exporters. The questionnaire was administered face to face to a total of 116 farmers/exporters in August – Dec 2008. The farmers/exporters were selected using cluster sampling from five main cut flower growing regions in Kenya. The survey data was coded and analyzed using SPSS 16.0.

Based on survey responses, phase 2 of the study focused on a few case studies to provide a detailed description of how the institutions and governance arrangements influence the potential of partnerships to build farmers' capabilities. Three contractual partnerships involving smallholders and exporters were selected for in-depth

interviews. The selection was based on a number of factors including: regional/geographical distribution; duration of partnership and the main focus of the partnership. The three cases studied here were drawn from the three of the five main growing areas – Naivasha, Limuru and Thika. In terms of duration, one case (Thika) had been on going for the last 10 years; the Limuru case had been in operation for five years while the third case – Naivasha – had been in operation for two years. All the three partnerships were focusing on market access for the same flower variety: *Eryngium spp.* The in-depth interviews conducted in Sept – Dec 2009 was face to face, using a checklist and were audio-recorded. The interviews were analyzed using Nvivo 8

RESULTS

The survey focused largely on learning and innovation resulting from these partnerships. Farmers were asked whether they had learnt new things from the partnerships and what had they learnt. Similarly, they were asked if they had applied the knowledge learned from the partnerships. Learning is almost a natural outcome of interactions between farmers and exporters. In the survey, 99 % of the respondents reported having learnt from the partnerships. This sharing of knowledge leads to broadening of the 'knowledge base of the farmers' and the type of knowledge (whether for production, value addition or marketing) gained and applied defines what capabilities are improved as a result of the interactions. Responses from the survey sample are discussed below.

Production capabilities: farmers rated their learning of production related capabilities quite high. This rating included questions on whether farmers had learnt of new varieties, new technologies, adaptation of new technologies to the needs of the farm, improved growing methods or how to comply with new environmental standards. Farmers gave a combined rating of 58.5 percent (i.e. new varieties, technologies + other production indicators). Ratings on the application of this new knowledge – innovation – followed a similar trend with farmers reporting having applied knowledge relating to production as follows: new varieties (89%), new technologies (78%), adapting new technologies (69%), new combinations of inputs (81%), complying with new standards (74%).

Value addition capabilities: As regards learning about value addition capabilities, farmers were asked whether as a result of partnerships, they had learnt of new bouquets/floral arrangements, learnt how to increase shelf/vase life, new better packaging/materials, or learnt how to reduce spoilage/damages on flowers. The farmers have rated this lowest at 18.2 percent. When they were asked whether they had applied the knowledge gained from the partnership, again the trend was similar: the indicators were scored poorly in comparison with either production or marketing capability indicators. These included: new bouquettes/floral arrangements (12%), improved shelf/vase life (57%), new packaging/materials (49%), reduced number of spoilages (58%).

Marketing capabilities: These include learning new marketing strategies, reducing the costs of production, complying with new market standards. The farmers have rated this at 23 percent. When asked whether they had applied the knowledge relevant to this capability, farmers rated as follows: selling in new markets (75%), complying with new market standards (72%) and reduced production costs (65%).

DISCUSSIONS AND ANALYSIS

In this study, "new markets" were defined to include new exporters, new outlets domestically and new export markets. Marketing capabilities indicators therefore include the fact that smallholders can sell through exporters as opposed to the

domestic markets; that the smallholders can switch to new exporters (and get new contracts with new terms) or even that the larger farmers can access new export markets for example in the US/Japan or even get into new contracts with new groups of farmers. The results from the survey show that marketing capabilities are rated quite high, implying that these partnerships appear to be achieving their market access objective. On the other hand, the survey findings show that farmers appear to be "locked out" of value addition activities, which are scored quite low for both learning and innovation but "locked in" into production activities, which are also scored quite high.

CASE STUDIES: INSTITUTIONS, INTERACTIONS AND INVESTMENTS

In order to explain these trends, three case studies of exporters who have entered into contractual arrangements with smallholders were examined. The partnerships were analyzed through a common framework focusing on a set of "three eyes" namely (i) *Interactions* – the frequency of contact between farmers and exporters (ii) *Institutions* – the attitudes and behaviors as well as formal (contractual) forms of monitoring and coordination and (iii) *Investments* – whether there is explicit investment by the exporters in assisting the farmers to meet the standards/quality/specifications. The interplay between the "three eyes" may contribute to or undermine capability building by increasing or decreasing opportunities for learning and innovation. The paper considers that building farmers' capabilities require continuous interactions, a favorable institutional framework that supports knowledge exchange as well as a deliberate strategy for technical, financial and managerial assistance.

(i) Institutions

Institutions are defined as 'the rules of the game' (North, 1990) i.e. the agreed and acceptable behaviour patterns, rules, and other social norms that constrain and regulate behavior of the individual actors. These institutions specify the expectations by each actor from their partners. In Kenya, it is a regulatory requirement for exporters wishing to source from smallholders to enter into formal contracts (HCDA export order, 1995). The partnerships are guaranteed by the regulator (HCDA) and the Ministry of Agriculture both of which are witnesses to the contracts and act as arbitrators in cases of conflict.

In all the three cases, the contracts provide that the exporter (through his agronomists) should provide training to farmers regarding the production aspects, including good agricultural practices, use of pesticides and fertilizers, planting calendar etc. These trainings are aimed at assisting the farmers to produce 'good quality flowers' i.e. flowers which meet the export standards. Quality in this case is defined by parameters that refer only to production aspects. For example, all the three contracts stipulated a good quality flower as one that is: (i) free from pest and disease damage (ii) free from physical damage (iii) good appealing colour as stipulated by the market and (iv) stems of minimum length, head size, weight and thickness as stipulated by the market. All these parameters are dependent either on the choice of flower variety, the soil/climate conditions, and good husbandry. As such, the definition of 'good quality flowers' as stipulated in these contracts include activities that range from planting to harvesting but excludes post – harvest activities.

In order to further entrench this exclusion from post harvest activities, clauses that relate to value addition assign the responsibilities for grading, bunching and packaging to the exporter. Farmers are only required to harvest the flowers and carry out preliminary grading (sorting). The exporters' agronomists then conduct the final grading (at the farmers' grading sheds) before taking possession of the flowers that meet the required standards. The exporter is responsible for transporting flowers (in

refrigerated trucks) to his/her pack house for further grading, bunching and packaging. At the exporters' pack house, depending on the flower variety, flowers are sleeved and subjected to pre-treatment solutions (prepared to specific concentrations) before they are packaged (in a specific manner, according to customer specifications) and wrapped in waxed paper before further cooling and shipment.

The clauses in the contracts prohibit farmers from entering into contracts with other exporters regarding the same crop for which they already have existing contracts with another exporter; neither can they sell flowers that have been rejected by the exporter in the domestic market. This is intended to curb any cheating by farmers who might be tempted to sell flowers to other exporters offering higher prices. The exporters' agronomists are required to supervise and certify that all such rejected flowers are destroyed. Whereas clauses such as these are intended to prevent possible cheating by farmers, they also serve to "lock in" farmers in these partnerships.

(ii) Interactions

Farmers' knowledge is largely experiential and tacit and requires face to face interactions/contacts in order to be transmitted. As such, the continuous and multiple interactions between farmers and exporters as well as amongst farmers themselves provide opportunities for farmers to share knowledge and learn from each others experiences. In these partnerships, prior to getting contracted, farmers are required to form groups and register with the Ministry of Social Services (MoSS). The formation of formalized groups provides a framework for farmers to interact with each other, learn together and besides making it easy for the company/exporter and other actors (e.g. NGOs, HCDA, input suppliers etc) to organize training events for the farmers. The contracts cover a period of one calendar year after which the contracts are renewed or terminated. During this period, there are multiple interactions between the company and farmers as well as amongst farmers themselves. The interactions between farmers and the company/exporter occur at three levels: (i) during policy meetings which occur at least twice a year for every group. These policy meetings focus on marketing and planning issues for the partnership (ii) during agronomic visits which occur daily for groups of farmers. These are organized such that each farmer is visited at least twice in a month. The agronomists use these sessions to hold regular training for farmers on production aspects (iii) during the weekly collection schedules when the exporters' agronomists visit farmers to collect the harvested flowers.

(iii) Investments

Lack of inputs and credit facilities is a key impediment to farmers willing to try new things. The exporter supplies planting materials, chemicals and other inputs besides arranging for credit facilities for the farmers. By providing inputs to farmers as well as offering credit facilities, the contractual partnerships have enabled farmers to overcome a key constraint to innovation. Farmers are organized into small groups and the exporters' strategy is intentionally geared towards investment in farmers' capability through financing and investment in provision of inputs and knowledge. The exporters conduct training to the farmers on a variety of issues including agronomy, group management, and financial management amongst other areas. Because of the investment made by the exporter, the cost of switching suppliers is very high and is seen as last option. This provides continuity in the partnerships.

LEARNING, INNOVATION AND CAPABILITIES

Having compared the case studies on the basis of their institutional set up, the opportunities for interactions and investments the question that begs is: How do the institutions, levels of interactions and investments explain the results from the survey? This section joins up the findings from the survey and the case studies to explain the observed trends with emphasis on learning and innovation.

Production capabilities: The high ratings on production capabilities can be attributed to the fact that the exporters' agronomists train the farmers on various production aspects including: different flower varieties that can be grown in their agro-ecological regions; good crop husbandry; safe and effective use of recommended chemicals and implementation of codes of practice. As a result of these trainings, the farmers learn of the various new varieties, new technologies for production and in some cases are able to adapt these technologies to their farms. In the process, farmers improve their growing methods, practices and comply with new environmental standards and regulations. The exporters supply farmers with inputs, seeds, fertlizers and pesticides on credit. This allows farmers to apply the knowledge gained hence the equally high ratings on innovation under this capability.

Value addition capabilities: The contracts allocate the bulk of value addition responsibilities to the exporter and the farmers participate only in the preliminary grading (sorting) of flowers. This initial grading is done at the farmer's central grading sheds under the supervision of the exporters' agronomists who conduct the final grading. After the grading at the farmers' sheds, the exporter collects all the flowers that meet quality requirements and transports them in refrigerated trucks to his/her pack house for further value addition. All the packaging materials are provided by the exporter who also retains the responsibility for packaging the flowers. Because of these provisions, farmers are locked out of the value addition process.

Marketing capabilities: The partnerships offer smallholder farmers new market opportunities and the exporter supports them by ensuring that their schemes/farms are certified to the necessary codes of practice. This ensures that they meet new market standards. During policy meetings with exporters, farmers are provided with market information on price, quality feed back reports, new standards and regulatory requirements. Through training on record keeping, farmers learn the importance of traceability and accountability issues. Further the farmers are advised on the planting programs that correspond to the market demand at particular times of the year. The support provided to farmers in marketing explains the high ratings by the farmers.

CONCLUSION

This study concludes that the partnerships are a double-edged sword. On the one edge, exporters are protecting the activities that generate premium rents by locking farmers out of the value addition processes. This helps them 'cut off' the smallholders from the export market by withholding the knowledge for value addition and processing flowers. This is because even if farmers produce high quality flowers, without value addition and post harvest handling knowledge, their ability to sell the flowers are severely limited. On the other edge, the exporters invest heavily in building farmers' production capabilities. To the benefit of smallholders, the knowledge gained from these partnerships act as "receptor sites" for more advanced knowledge in cut flower production. This conclusion is supported by the works of Cohen and Levinthal (1990) who have noted that the ability of actors to absorb/assimilate new knowledge is dependent on their existing knowledge base.

REFERENCES

Bolo, M. 2005. Agricultural science technology and innovation system in Kenya: A case study on the floriculture subsector. Unpublished research report submitted to the Technical centre for Agricultural and Rural Cooperation (CTA). The Netherlands

Chataway J, Smith, J and Wield, D. 2005. Partnerships for building science and technology capacity in Africa: UK and Canada Perspectives. *Paper presented to conference 'Building Science and Technology capacity with African partners: An Africa-canada-UK Exploration*, London, 31 Jan – 1 Feb 2005.

Christopher, M and Juttner, U. 2000. Developing strategic partnerships in the supply chain: a practitioner perspective. *European Journal of Purchasing and Supply Management* 6, 117 – 127

Clark, N. 2001. Innovation Systems, Institutional Change and the New Knowledge Market: Implications for Third World Agricultural Development. UNU-INTECH Discussion paper series no 2001-10

Dolan, C; Opondo, M and Smith, S. 2004. Gender, Rights and Participation in the Kenya Cut Flower Industry. NRI report no. 2768, National Resources Institute. London, United Kingdom.

Edquist, C. 1997. Systems of Innovation: Technologies, Institutions, and Organizations. London, Pinter,

Francis, J. 2009. Innovation systems, food security and economic development: Lessons from the ACP region. Wageningen, the Netherlands.

Fintrac 2005. Summary report: Baseline Survey of Kenyan Smallholder Flower Sector. Nairobi, Kenya, Horticultural Development Centre (HDC).

Gachukia et al, 2003. Development of gladioli and lilies for local and export markets. Technical note series. Nairobi, Kenya, KARI.

GoK 2004. Strategy for Revitalizing Agriculture (2004 - 2014), Ministry of Agriculture and Ministry of Livestock and Fisheries Development. Nairobi, Kenya

Hall, A 2006. Public Private Sector Partnerships in Agricultural System of Innovation: Concepts and challenges. UNU-MERIT Working Paper Series no. 2006 – 002 Maastricht, the Netherlands

Hall, A, L.Mytelka and B Oyeyinka, 2006. Concepts and guidelines for diagnostic assessements of agricultural innovation capacity. UNU-MERIT working paper series no 2006-017. Maastricht, the Netherlands

Johnsen, R.E and Ford, D 2008. Exploring the concept of asymmetry: a typology for analyzing customer supplier relationships. *Industrial Marketing and Management* 37, 471 – 483

Kaplinsky, R 2006. Globalization, Poverty and Inequality: Between a rock and a hard place. Cambridge, Polity press

Korovkin, T 2003. "Cut flower exports, female Labour and Community participation in Highland Ecuador", *Latin American perspectives* 30(4), 18 – 42

Leornard-Barton, D 1992. Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. *Strategic Management Journal* vol. 13, 111 – 125

Lundvall, B.-Å, B. Johnson, E; S Andersen and B. Dalum (2002) National Systems of Production, Innovation and Competence building. *Research Policy* 31 (2002) 213-231

Lundvall, B.-A. 1985. "Product innovation and user-producer interaction, industrial development." research series 31. Aalborg University Press Aalborg.

Mackenzie, D and Wacjman, J. 1985. *The Social Shaping of Technology*, Milton keynes, Open University Press

Mather, C. 2008. Value chains and tropical Products in a changing Global trade Regime. ICTSD project on tropical products, Issue paper no. 13, International Centre for Trade and Sustainable Development, Geneva, Switzerland.

Muthoka, N. M and Muriithi, A. N, 2008. "Small holder summer flower production in Kenya: A myth or prospect?" Acta Horticulturae **766, ISHS (2008)**

Parker, D and Hartley, K 1997. The economics of partnership sourcing versus adversarial competition: a critique. *European Journal of Purchasing and Supply Management* vol. 3, No. 2 pp. 115 – 125

Prahalad, C.K and Hamel, G 1990. The Core Competence of the Corporation. *Harvard Business Review,* May-June, 1990

Robinson, D; Hewitt, T and Harris, T (eds), 2000. *Managing Development: Understanding Inter-organizational Relationships,* London, Sage Publications in association with the Open University.

Sonko, R; Jnue, E; Ssebuliba, J.M and de Jager, A. 2005, "Pro-poor Horticulture in east Africa and South East Asia: The horticultural sector in Uganda." Wageningen University and Research Centre. Wageningen, Netherlands.

Teece, D.J; Pisano, G and Shuen, A. 1997. Dynamic Capabilities and Strategic Management. *Strategic Management Journal* vol. 18:7, 509 – 533

World Bank 2006. Enhancing agricultural innovation: How to go beyond strengthening research systems. Agriculture and Rural development (ARD), World Bank, Washington DC